Enhancement of vitamin D in our food as a benefit for human but also for animal

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Title: Enhancement of vitamin D in food - beneficial for human but also for animal

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Vitamin D deficiency and associated health risks are a problem that needs to be handled around the world. Generally, dietary intake recommendation is not met. Due to the development of simpler and cheaper chemical analyzes of vitamin D, more information on vitamin D content in food has been obtained.

Intervention studies have shown the possibility of increasing dietary intake with dietary supplements, enriched food and bio-fortified food. Some countries have chosen to introduce mandatory fortification, for example Finland, or some countries have many enriched foods for example US, while others still discuss what strategy to bring into their country. A viable strategy is to enrich a broader range of foods and / or increase the natural content of vitamin D in foods.

Traditional fortification is to add vitamin D to the final food product, for example milk, which may result in mandatory fortification. Vitamin D, given to domestic animals in the feed, thus changing the content of vitamin D in the final food product for the consumer, is called bio-fortification. An alternative bio-fortification strategy is to exploit the vertebrate's ability to produce vitamin D in the skin when exposed to UVB light (290-320 nm), either from the sun or from artificial lighting.

The talk will give an overview of the results obtained on the amount of vitamin D in food of domestic animals raised on bio-fortification strategy and, if possible, the improved health of the animal will be included. A summary of the current knowledge on the quantification of the total vitamin D activity based on chemical analyzes of vitamin D-active metabolites will also be included.